



Faculty Working Papers

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THE ABANDONMENT OF A RAILWAY LINE--
SHERMAN AND WASCO COUNTIES, OREGON

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Transportation Research Paper #5

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College of Commerce and Business Administration
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A CASE STUDY OF THE EFFECTS OF THE ABANDONMENT OF A RAILWAY LINE--
SHERMAN AND WASCO COUNTIES, OREGON*

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*The author is greatly indebted to a number of persons who assisted in this study, particularly: Mr. Thomas W. Thompson, County Extension Agent of Wasco County; Mr. Robert Brisbine, Manager, MIDCO Grain Growers Association, Moro; Mr. Paul Patrick, Manager, Sherman Cooperative Grain Growers Association, Wasco; Mr. Joe Hood, Manager, Dufur Elevator Company; Mr. Ray Hughes, Manager, Hughes Feed and Fuel Company, The Dalles; Mr. Frank Adams, Manager, Interior Elevators, The Dalles; Mr. Giles French, retired Editor-Publisher of the Sherman County Journal; Mr. C. H. Burnett, Vice President, Union Pacific Railroad, Portland; Dr. Stephen Thompson of the Interstate Commerce Commission staff; The Dalles Chronicle and The Sherman County Journal for access to their files of back issues; the Department of Economics, University of Illinois, for research funds; Professor Ben Allen for his suggestions.

A very faint, light gray watermark-like image of a classical building with four prominent columns and a triangular pediment is visible in the background of the page.

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On the evening of the 17th of December, 1964, a Union Pacific local freight, with 40 cars of wheat behind two diesel units, crept slowly down Spanish Hollow, northbound from Kent to The Dalles, in north central Oregon. The flanges of the boxcars squealed on the sharp curves; the engineer tended the brakes carefully on the 3.47 percent grade that terminated at the main line along the Columbia River. The train had gone up early that morning--the two GP9s working hard to take 39 empties and a car of diesel fuel up the grade. The train approached the main line at the foot of the grade; the switches were opened; the last boxcar and the caboose swung across the switch, and the train gained speed on the 17-mile run down the main line to The Dalles. No member of the crew, no one in the towns in which the train had been gathering the cars of grain, ever thought for a moment that never again would a freight train come down Spanish Hollow out of Sherman County.¹

The primary purpose of this paper is to consider the effects that the ending of service had upon the economy of Sherman County. The line involved was the Union Pacific's branch extending from Biggs, on the main Omaha-Portland line 17 miles east of The Dalles, 52 miles to Kent, and, prior to 1943, an additional 17 miles to Shaniko. The line served Sherman County, and, prior to the 1943 abandonment, the southern portion of Wasco County. Study was also made of a second line twenty miles to the

¹This introductory paragraph is somewhat apocryphal in detail but not in substance.

west, the Great Southern, extending south from The Dalles 41 miles to Dufur and Friend.

THE COLUMBIA SOUTHERN, LATER THE UNION PACIFIC'S SHANIKO-GRASS VALLEY BRANCH

Settlement of the Area¹

The Columbia River directly east of the Cascades is located in a relatively deep gorge. The land to the south rises abruptly to an elevation of 1,000 feet, and then continues to rise more gradually to approximately 3,600 feet on the Shaniko plateau, 75 miles to the south. Beyond Shaniko, the land falls precipitously 1,500 feet to the valleys of the Deschutes and the Crooked Rivers and their tributaries. The portion just south of the Columbia is deeply eroded by narrow canyons, and cut by two major rivers, the Deschutes and the John Day. These two rivers are, like the Columbia, cut deeply into gorges, in most areas inaccessible from the plateau above. There are only two crossings of the Deschutes between its mouth and central Oregon (Sherar's and Maupin). The area to become Sherman County was that located between these two rivers. The pioneers avoided this rough, nearly treeless, and barren country, and headed for the more congenial Willamette Valley. Ultimately a major immigrant route crossed the area, swinging south from the mouth of the John Day River and crossing the Deschutes at Sherars Bridge, headed for the Barlow road around the south side of Mt. Hood--but no immigrants tarried. A few settlers came in the late 1860s, primarily grazing cattle, but not until the late 1870s and early 1880s was the area actually settled, after the discovery that the hills would grow wheat satisfactorily if cultivated only in alternate years.

¹ The best history of the area is The Golden Land: A History of Sherman County, by Giles French (Portland: Oregon Historical Society, 1958).

Wheat production began about 1880, but not until the coming of the Oregon Railway and Navigation line (later Union Pacific) in 1882 along the Columbia did it develop on a large scale. By 1885 the output in the county was 1.5 million bushels. But the wheat had to be hauled by wagon down the steep grades to the Columbia--from as far south as Kent, requiring three or four days. The John Day and the Deschutes, to put it mildly, are not navigable. In 1889, the settlers sought a county of their own, and Sherman County was created out of Wasco County, consisting of the area bounded by the Columbia, the Deschutes, and the John Day. Despite strong efforts to extend the county all the way to Crook on the south, it was cut off just below Grass Valley; later the boundary was pushed farther south, but to this day Wasco cuts below it to meet Jefferson. The village of Moro was chosen as the county seat, although Wasco was the larger town, as the voters of Grass Valley preferred a county seat farther south.

The Building of the Railroad

The settlers of Sherman County were faced with two major concerns. One was the land title situation; alternate sections in a six-mile strip had been granted by the Federal government to The Dalles Military Road Company in 1870, which in turn sold it in 1876 to a San Francisco firm, the Eastern Oregon Land Company. Primarily this grant affected the southern part of the county. There was dispute over land titles, and the Land Company sought prices that the farmers, who were renting the land, regarded as intolerable. Not until the 1930s was the land situation entirely cleared up. The second was the lack of a railroad, which limited grain production and made travel laborious.

After various false starts, on March 4, 1897, the Columbia Southern Railroad Company was chartered to build a railroad from the Columbia River via Sherman County to Prineville and other points in central Oregon. The CS was initiated by E. E. Lytle of The Dalles. Lytle was associated with the Oregon Railway and Navigation Company (Union Pacific), and the road had Union Pacific financial assistance, but he operated with considerable autonomy. The line was started in June of 1897 at a point named Biggs on the O R and N (Union Pacific) main line at the foot of Spanish Hollow, and was completed as follows:

Wasco	October 6, 1897
Moro	January 15, 1899
Grass Valley	March 27, 1900
Shaniko	May 13, 1900

Moro provided \$5,000, Grass Valley \$1,000 toward construction.

The road immediately established passenger and freight service, the passenger train connecting with the day trains to and from Portland, making the run down to the Columbia in the morning, up in the afternoon (Figure 4). In 1902, it carried 29,080 passengers--about 40 passengers each way daily. The line was cheaply built--as was typical of most branch lines in the west in the period--no ballast, minimum of grading, 56 pound rail laid without tie plates. But it was soon handling a substantial volume of traffic, not only for Sherman County, but for the vast area to the south, for which it was the nearest railhead. Passenger and freight traffic to Prineville--the metropolis of all central Oregon in the period--was carried by the railroad. It is reported that for the next two decades Shaniko--itself capable of generating little traffic in anything--became

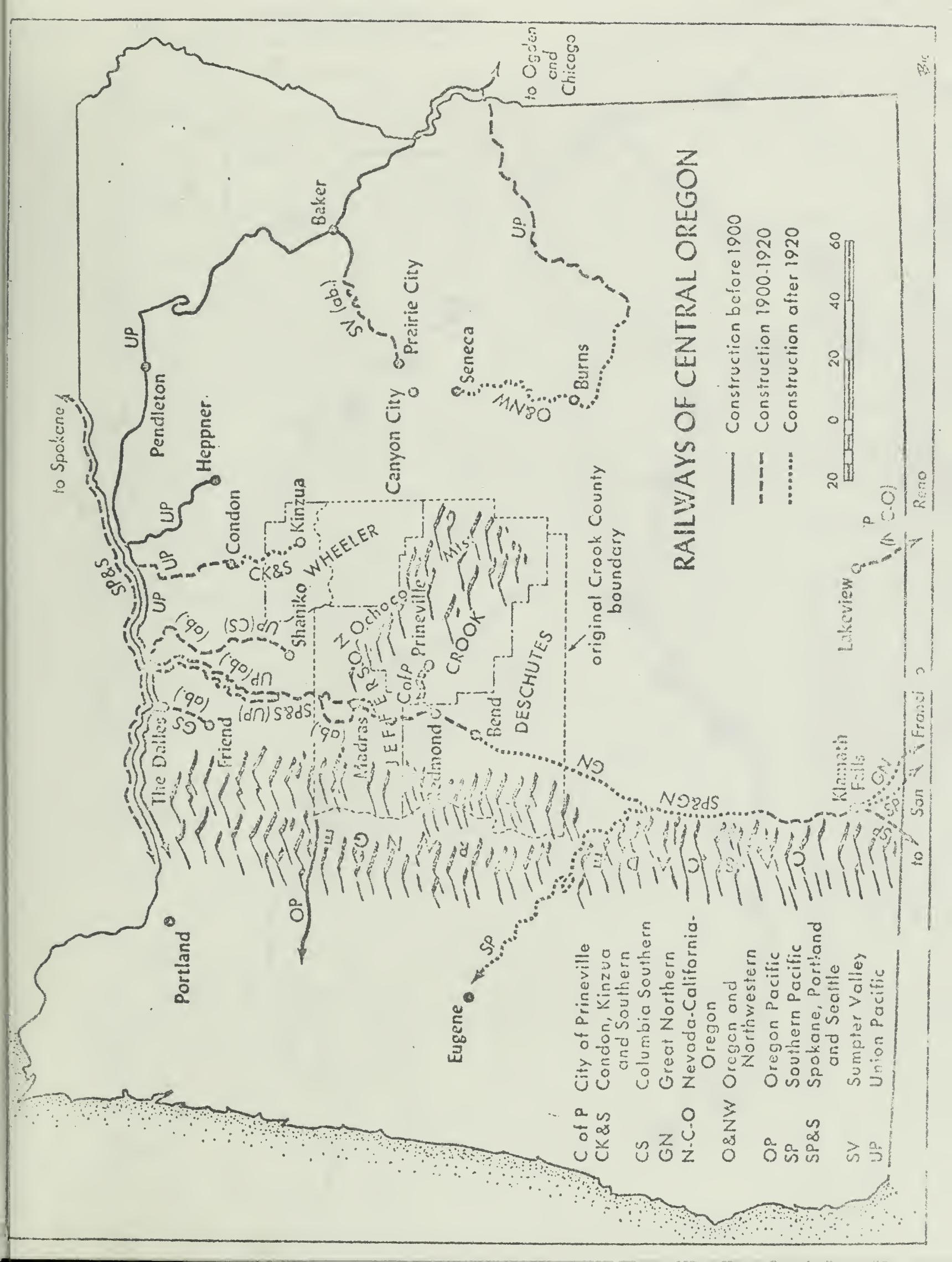


Figure 2

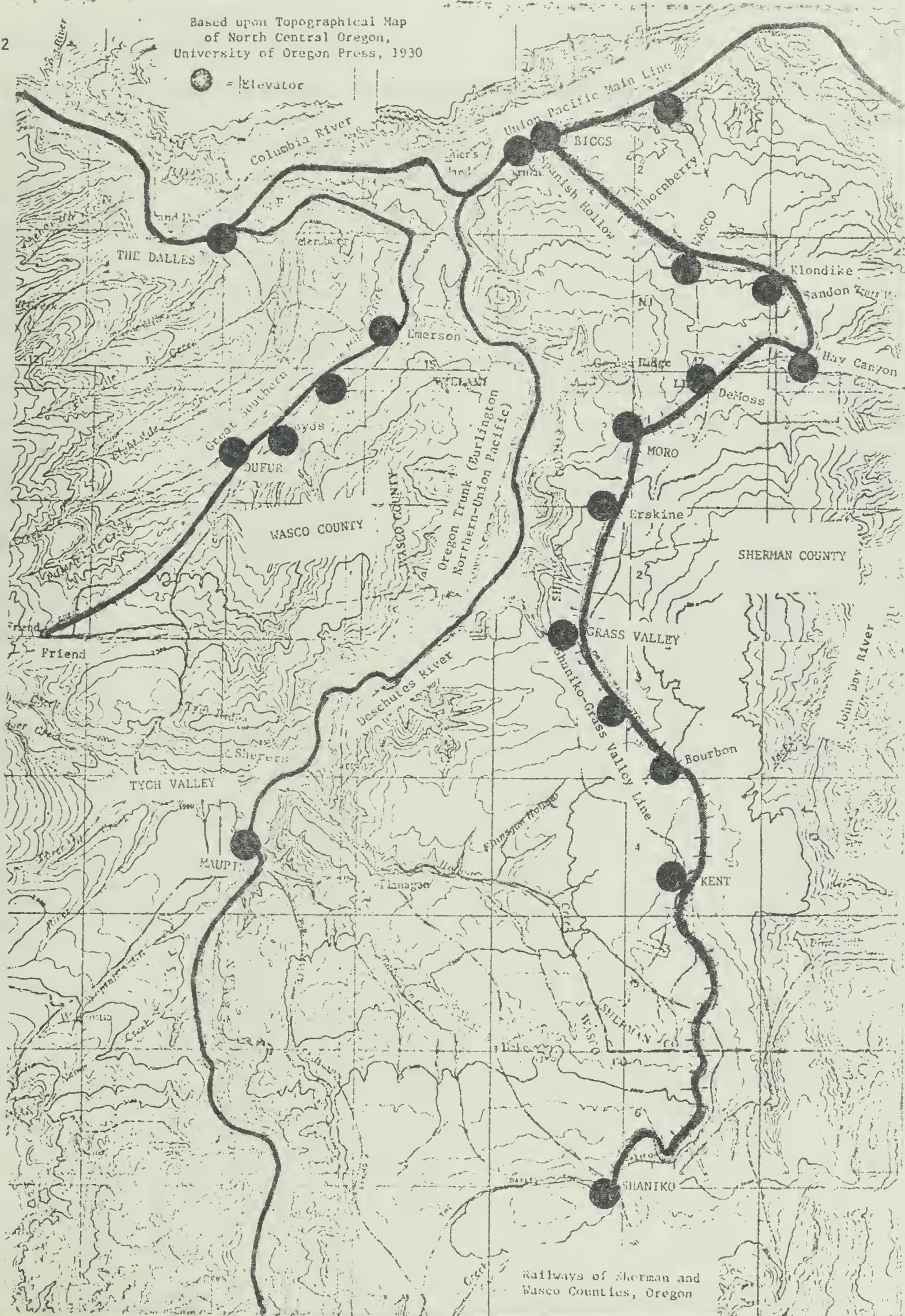
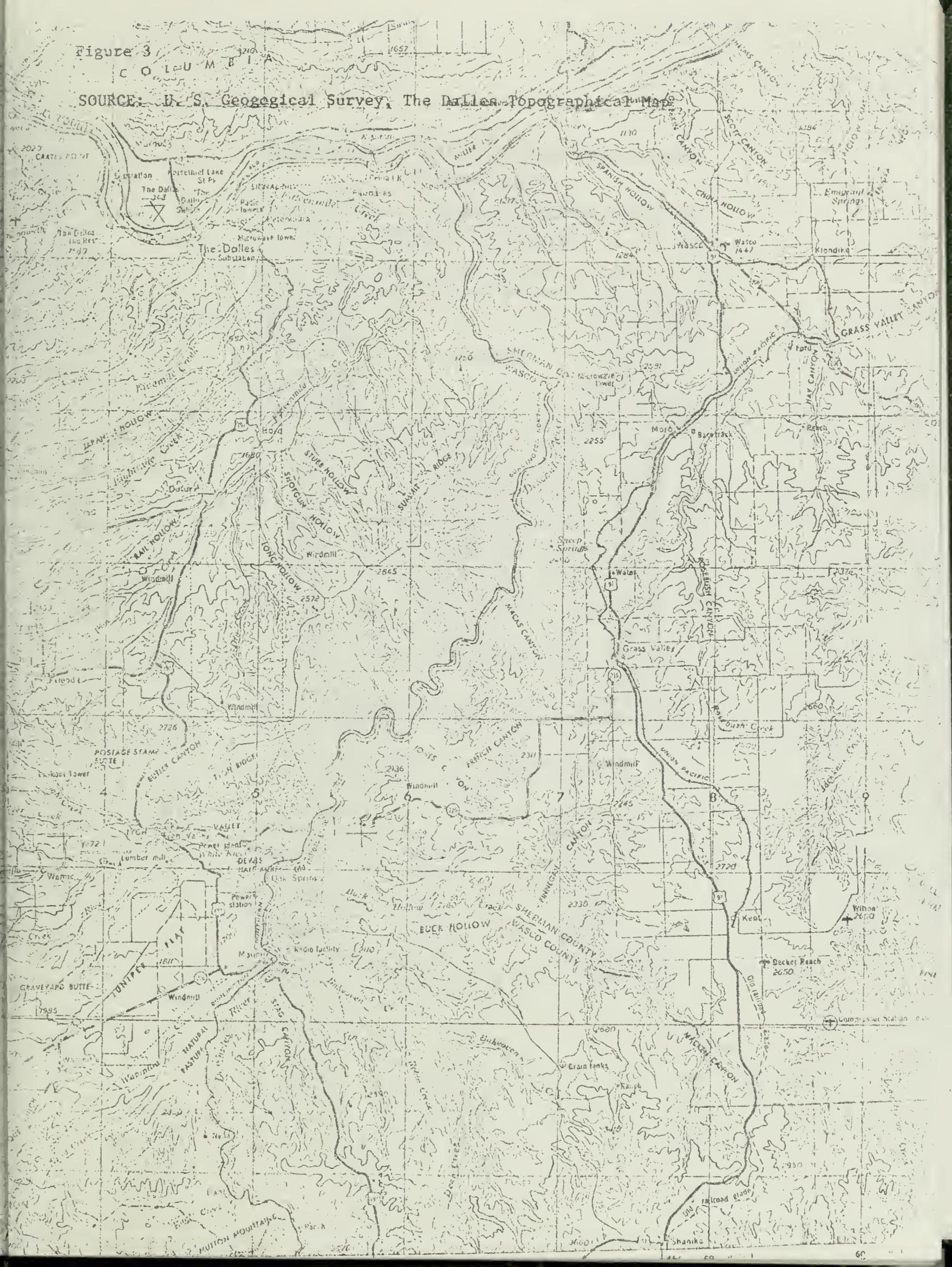


Figure 3

C O L U M B I A

SOURCE: U. S. Geological Survey, The Dallas Topographical Map



Columbia Southern Railway Company

TIME TABLE

Effective 12:01 a. m., September 9, 1900

First Class South Bound	STATIONS	First Class North Bound
NO. 2 DAILY PASSENGER		NO. 1 DAILY PASSENGER
Leave P. M.		Arrive A. M.
1 34	BIGGS	11 25
1 59	Gibsons	11 00
2 14	Wasco	10 45
2 27	Klondyke	10 30
2 33	Summit	10 25
2 45	Hay Canyon Junction	10 15
2 48	McDonalds	10 12
3 00	DeMoss	10 00
3 09	Moro	9 50
3 19	Erskinville	9 39
3 44	Grass Valley	9 15
4 08	Bourbon	8 55
4 26	Kent	8 40
4 40	Wilcox	8 30
5 20	SHANIKO	8 00
Arrive P. M.		Leave A. M.

Daily Stage Line Connections

— TO —

ANTLOPE	CROSS KEYS	HAY CREEK
GRIZLEY	PRINEVILLE	CLARNO
FOSSIL	ASHWOOD	GRADE
MITCHILL	PAULINA	MOWRY
RILEY	PRICE	BURNS
SISTERS	PASLEY	SILVER LAKE
LAKEVIEW	LAMONTA	WARM SPRINGS
ANTONE	DAYVILLE	JOHN DAY
		CANYON CITY

Figure 4

the largest shipping point for wool in the United States, produced in the vast area to the south.

As noted, the original plans called for extension of the line to Prineville, and for a decade there were many announcements that construction would soon start. And there appears little doubt that the Lytle management did wish to build south. But there was one great obstacle: the 1,500 foot drop off south of Shaniko. The two alternative wagon routes, the main one via Cow Canyon, the second via Antelope Canyon, were regarded as among the most difficult roads to travel in the west. And there was little logic in hauling all central Oregon freight up this 1,500 foot grade and then back down to the Columbia over a rail line not well built at best. Suddenly, in 1905, Lytle resigned as president--probably forced out by the Harriman interests of the Union Pacific--and the following year all CS directors were replaced by Union Pacific officials; in July, 1906, the Columbia Southern was leased by the OR and N and in December, 1910, purchased by the Oregon - Washington Railway and Navigation Company, successor to the OR and N. Thenceforth it was operated as an integral part of the Union Pacific, which absorbed the O-W January 1, 1936. To this day, however, this line is referred to in the area as the Columbia Southern. Complete Union Pacific domination involved the end of the plans to build south; by now the Union Pacific had decided that if it were to build into central Oregon it would do so via the Deschutes canyon, to avoid the grades of the Shaniko route.

Meanwhile, operations continued much as before on the line. The shops were built in Shaniko, the town being created by the railroad and sale of

lots promoted. The other four towns on the line had all existed prior to the building of the railroad; the circuitry of the line was, in part, a product of the desire to reach these four towns.

In 1909 occurred a chain of events that was in the end to play a major role in the demise of the Shaniko line. In view of the prospect of lumber development in central Oregon, both the Union Pacific and the Hill interests (Great Northern, Northern Pacific) build lines southward from the Columbia down the gorge of the Deschutes, the Hill line--the Oregon Trunk--on the west bank, the Union Pacific on the east bank. When the lines reached Metolius, an agreement was reached to avoid further duplication and a single line was built into Bend; ultimately all duplication was ended and both roads used one track (most of it being the Oregon Trunk's line). The effect of the construction was a temporary boom on the Shaniko line hauling materials for the new road, but after operations opened to Bend in 1912, the new lines took all of the central Oregon traffic--freight, passenger, mail, express. The Shaniko line now became strictly a dead-end local branch. The new lines were of little benefit to Sherman County (except for tax revenue on the UP line); because of inaccessibility they might as well have been in the Fiji Islands. A few farmers did haul wheat to a loading station at Sherar's Bridge, down a steep and rocky grade.

Changes in Operation

The loss of the through traffic and the limited population of Sherman County soon brought the end of separate passenger train operation, and the daily train became a mixed train, handling freight and passengers. Then came the motor vehicle to eliminate most of the passenger traffic. To facilitate mail, express, and LCL freight traffic, operations were shifted

from day to night, and for a number of years, as shown on Figure 5, a connection was made at Biggs (aroun. 3 AM) with the night train from Portland. The two lines to the east--the Condon and Heppner branches--were operated in similar fashion. By 1930 the train was going only to Grass Valley except four days a week; by 1934 all service on the line was tri-weekly; in 1936 the train became a "freight train" carrying passengers on irregular schedule, as shown in Figure 5. Also in 1936 the UP contracted with a truck line to haul the mail, express, and LCL traffic and bus service handled passengers. In 1940, service became only bi-weekly--and by 1942 the UP passenger timetable no longer showed the trains. Two passengers were carried in 1940, eight in 1941.

Apart from the loss of the LCL traffic, the rail traffic remained relatively constant, as shown in Table I--primarily wheat outbound, with some cattle; coal, petroleum products, feed, fertilizer, and farm machinery items inbound. Already most livestock and wood were moving by truck. But by the end of the thirties, with the worst of the depression over, there was little thought that the UP might consider abandoning the line.

The Abandonment Application

On June 6, 1942, completely unexpectedly, the Union Pacific applied to the Interstate Commerce Commission to abandon the line, and indicated that the track had been requisitioned by the Metals Reserve Corporation (a Federal agency) at the request of the War Production Board to provide rails and equipment for defense purposes. It was generally believed in the area that the idea to abandon was not the UP's, but the WPB's--that someone in Washington had looked at a map, seen that this line appeared to be very close to the Deschutes canyon line, and decided that it was an

Figure 5

TRAIN SCHEDULES ON THE SHANIKO LINE
1930-1941

June 1, 1930

Table 72. BIGGS AND SHANIKO.						
128	103	Mile	Leave	June 1, 1930.	Arrive	105 125
7 M	7 P M		Leave	Arrive	AM	AM
1045	1045			Portland	7 15	7 15
8 AM	8 AM		Leave	Arrive	AM	AM
7250	7250	o		Biggs	8 15	8 15
420	420	5 45		Thornberry	8 30	8 30
420	420	7 30		Sink	8 30	8 30
420	420	9 15		Warco	8 30	8 30
455	455	10 45		Klondike	8 30	8 30
500	500	10 45		Sardon	8 30	8 30
520	520	10 45		Nish	10 50	10 50
535	535	10 45		De Moss	10 50	10 50
550	550	10 45		Moro	10 50	10 50
610	610	10 45		Erskine	8 40	8 40
645	645	8 30		Grass Valley	8 15	8 15
725	725	8 30		Bourbon	8 45	8 45
725	725	8 30		Kent	8 35	8 35
740	740	8 30		Wilcox	8 20	8 20
820	820	6 45		Shaniko	8 45	8 45
AM	AM		Arrive	Leave	PM	

✓ Tuesday and Saturday.
✓ Tuesday, Thursday and Saturday.
✓ Flag stop.
✓ Sunday, Monday, Wednesday and Friday.
✓ Saturday only.
□ Ferry.
△ Motor.
• Mixed train.

February, 1934

PORTLAND, BIGGS AND SHANIKO						
Table No. 82 Pacific Time			Table No. 83 Pacific Time			Mixed
18-196	Mile	18-196	Portland	Ore.	125-17	
5 35	o	12 23	104	Ar.	7 35	
5 35	o	12 23	104	lv	8 00	
5 35	o	3 05	Biggs	"	11 55	
5 35	o	3 05	Biggs	"	11 20	
5 35	o	3 05	Thornberry	"	11 15	
5 35	o	3 05	Sink	"	11 05	
5 35	o	3 05	Wasco	"	10 35	
5 35	o	3 05	Klondike	"	10 30	
5 35	o	3 05	Sardon	"	10 15	
5 35	o	3 05	Nish	"	10 15	
5 35	o	3 05	De Moss	"	10 05	
5 35	o	3 05	Moro	"	9 55	
5 35	o	3 05	Erskine	"	9 35	
5 35	o	3 05	Grass Valley	"	9 15	
5 35	o	3 05	Bourbon	"	8 55	
5 35	o	3 05	Kent	"	8 35	
5 35	o	3 05	Wilcox	"	8 20	
5 35	o	3 05	Shaniko	"	7 45	

• Daily. f Daily except Sunday. \$ Sunday only. 7 Daily except Monday. (a) Monday only. (b) Tuesday and Saturday. (c) Tuesday, Thursday and Saturday. (d) Stops to let off paying passengers from main line points east of Sherman. (e) Stops only on signal. (h) Tuesday, Thursday, Saturday only. (i) Monday, Wednesday, Friday only. (k) Daily except Saturday. (m) Except Saturday and Sunday. (n) Saturday only. (s) Monday, Wednesday and Friday only. (v) Daily Except Saturday and Sunday. *Local Freight, carries passengers. See Note Next page.

December, 1936

BIGGS-SHANIKO

Freight 326		Mile	Table No. 96 Pacific Time		Freight 325	
0	12	Biggs 29	w	w		
5	5	Thornberry	w	w		
7	"	Sink	w	w		
9	"	Wasco	w	w		
14	"	Klondike	w	w		
15	"	Sardon	w	w		
20	"	Nish	w	w		
27	"	De Moss	w	w		
27	"	Moro	w	w		
31	"	Erskine	w	w		
38	w	Grass Valley	w	w		
38	w	Grass Valley	w	w		
45	"	Bourbon	w	w		
52	"	Kent	w	w		
57	"	Wilcox	w	w		
68	w	Shaniko	w	w		

March, 1939

Biggs — Shaniko

Freight 326		Mile	Table No. 91 (Pacific Time)		Freight 325	
Motor	Bus	Mile	Motor	Bus	Mile	
3 30	Ar.	12 10	3 30	Ar.	11 50	
	lv	Biggs 6	o	Biggs 8	o	
	5	" Thornberry	w	" Thornberry	w	
	7	" Sink	w	" Sink	w	
	9	" Wasco	w	" Wasco	w	
	14	" Klondike	w	" Klondike	w	
	16	" Sardon	w	" Sardon	w	
	20	" Nish	w	" Nish	w	
	23	" De Moss	w	" De Moss	w	
	27	" Moro	w	" Moro	w	
	31	" Erskine	w	" Erskine	w	
	39	" Grass Valley	w	" Grass Valley	w	
	45	" Bourbon	w	" Bourbon	w	
	52	" Kent	w	" Kent	w	
	57	" Wilcox	w	" Wilcox	w	
	69	Ar. Shaniko	w	Shaniko	w	

No. 325 is a freight train carrying passengers on an irregular schedule between Shaniko and The Dalles. Leaves Shaniko on Tuesdays, Thursdays and Saturdays.

February, 1941

Biggs — Shaniko

Freight 326		Mile	Table No. 91 (Pacific Time)		Freight 325	
Motor	Bus	Mile	Motor	Bus	Mile	
3 00	Ar.	12 10	3 00	Ar.	12 10	
	lv	Biggs 6	o	Biggs 8	o	
	5	" Thornberry	w	" Thornberry	w	
	7	" Sink	w	" Sink	w	
	9	" Wasco	w	" Wasco	w	
	14	" Klondike	w	" Klondike	w	
	16	" Sardon	w	" Sardon	w	
	20	" Nish	w	" Nish	w	
	23	" De Moss	w	" De Moss	w	
	27	" Moro	w	" Moro	w	
	31	" Erskine	w	" Erskine	w	
	39	" Grass Valley	w	" Grass Valley	w	
	45	" Bourbon	w	" Bourbon	w	
	52	" Kent	w	" Kent	w	
	57	" Wilcox	w	" Wilcox	w	
	69	Ar. Shaniko	w	Shaniko	w	

No. 325 is a freight train carrying passengers on an irregular schedule between Shaniko and The Dalles. Leaves Shaniko on Wednesdays and Saturdays.

TABLE I
DATA RELATING TO THE SHANIKO LINE PRIOR TO 1942

A. Traffic, 1941:

<u>Commodity</u>	<u>Cars</u>
Wheat	904
Livestock	73
Coal	29
Petroleum Products	64
Miscellaneous	120
Total	1,190 or 44,051 tons

B. Net Revenue, 1941:

Revenue attributable to the line, on and off the branch	\$131,191
Expenses of operation of the line:	
Maintenance of way	48,218
Maintenance of equipment	3,084
Transportation	22,770
Miscellaneous	26,203
Total	100,275
Expenses, handling traffic off the branch, on operating ratio basis	63,934
Taxes	14,297
Net Deficit	37,569

C. Traffic and deficits over preceding years:

<u>Year</u>	<u>Cars</u>	<u>Deficit or Profit¹</u>
1937	1,785	+ 31,905
1938	1,530	+ 20,250
1939	1,683	+ 24,217
1940	1,337	- 11,480
1941	1,190	- 21,322
1942, 6 mos.	539	na

¹Using the I. C. C. formula for determining expenses of handling the traffic off the branch.

ideal candidate to release steel, and the UP simply went along. Another version is that the UP was pressure by WPB to offer lines to free steel--and concluded that this was one of their weaker ones. The Union Pacific's president, Jeffers, played a key role in the defense production hierarchy. Regardless of where the idea originated, the Union Pacific pressed the case--which immediately brought protests from the shippers, the communities served, labor, and other groups. Hearings were held. The Union Pacific's case was essentially that the line was of marginal profitability at best; that some traffic was being lost to trucks; that some bridges needed rebuilding; and that the line had been requisitioned anyway.

As of 1942, 37 miles of track were laid with 90 pound rail (entirely adequate for branch line service), 31 miles with the original 56 pound rail, all on the southern end of the line. The road was replacing 5 percent of the ties annually; the UP granted that there was no deferred maintenance, except for the need to rebuild three bridges. The line was being operated with a steam locomotive, a Consolidation¹ with tractive power of 43,305 tons, weight 189,000 pounds, that was kept in The Dalles and used only for the Shaniko line (typically four days a week). Given the grades, the locomotive could move 700 tons northbound, 345 tons southbound, or about 12 loaded cars. About 10 hours were required for the southbound trip, eight hours for the northbound; thus the train took two days to make the round trip. A crew of six men was utilized. In addition to the crew, there were nine maintenance of way employees and four station agents (Wasco, Moro, Grass Valley, Shaniko).

¹A wheel arrangement of 2-8-0, with low drivers, designed for low speed freight operation with steep grades.

The Union Pacific estimated the salvage to be \$221,000 for the rail, \$8,450 for the land.

In its application the Union Pacific stressed three basic arguments:

1. The losses of the last two years.
2. The requisition of the rail for defense purposes.
3. The fact that trucks were handling some grain, and could handle more.

The application led to strong and united protest from all parts of the county--the three cooperatives and other groups. Money was raised to send three community leaders to Washington to fight the abandonment. The protestants stressed several elements:

1. The line had been showing a profit consistently until 1941; the trouble currently was temporary, caused by the loss of export wheat markets resulting from the war.
2. Virtually all the grain continued to move out by rail--an estimated 97 percent.
3. There were no suitable alternatives for moving the grain out.
4. The wheat rates had been reduced drastically by the UP to discourage truck and water movements, and were far below the maximum figures prescribed. For example, the rate from Shaniko had been 25 cents in the 1920s; it was now 12½ cents. With higher rates, the road would show a profit.

Division 4 of the Commission recommended against any abandonment, on the basis of the arguments of the protestants. Meanwhile the Metals Corporation released its hold on the rails; there had been too much national outcry and pressure from influential legislators, including Oregon's Senator Charles McNary, against the policy. The case was appealed to the entire commission, and on July 26, 1943, it reached its decision: the portion south of Kent offered too little traffic to warrant continuation; only the elevator and warehouse at Shaniko were served, and only the elevator operator protested. This portion, with its light 56 pound

rail, was in the poorest condition and the source of the deficit. The wool from the area was already being trucked. The Commission concluded that the remainder could be operated at a profit and that the large volume of wheat being shipped could not be handled by trucks. The shippers at Shaniko persuaded the Commission to defer the effective date from July to November 30, 1943 to allow the elevator to move out the wheat, and as of that date the southern portion was abandoned and the rails pulled up. The Union Pacific did not protest the decision and proceeded over the next several years to make some improvements to the line.

1943-1964

For the next twenty-two years, operation of the line--now called the Grass Valley line--and traffic changed very little. The old Consolidation went the way of all steam locomotives in the period and was replaced by diesels; by using two in multiple, it was possible to increase the load materially, and with the line shortened to Grass Valley it was now possible to make the round trip in one sixteen-hour day. Service was no longer scheduled, trains being operated when traffic warranted, but in practice this meant from once or twice a week. One of the great advantages of grain traffic is that high frequency is not required. It is highly important to move the grain in quantity when the shippers wish to ship--but no need to provide daily operation, as with much manufactured goods traffic. There was no further talk of abandonment; the Union Pacific was apparently satisfied with continued operation of the line.

The Fatal Day

The area directly south of the Columbia River has long been subject to flooding. Sudden summer cloudbursts are not uncommon in this low rainfall ar-

the canyons coming down to the Columbia are steep and narrow and water can rise very rapidly in them. (By contrast, the Deschutes never varies significantly.) In 1903 a summer flood devastated much of the area and wiped out the town of Heppner, killing 200 persons out of less than 1,000 population. The Grass Valley line had always been subject to some flood problems, most of them not serious.

In December of 1964, cold weather came early, and in the week of the 15th, froze the ground, which lacked snow cover. Next came a 12-inch snow--unusually heavy for an area that does not get much snow. Then on the 20th and 21st the temperature went up into the mid-fifties and the rain began. Five inches of rain fell--half the normal annual total--on the snow, under which lay frozen ground, unable to absorb moisture.¹ The result was disaster on the night of the 22nd-23rd. The business districts of Wasco and Moro were under water, all communications were out, and roads blocked. The creeks went high out of their banks, pouring flood waters down the steep canyons. One of the most serious casualties was the railroad line. When the rain and flood subsided, a helicopter was used to survey the line. Stretches of railroad had vanished--rails, ties and grade--and in places there was no evidence that there had ever been a railroad.

Initially it was presumed that the line would be rebuilt; but within a month there were rumors that the line would not be rebuilt, or not above Hay Canyon. The UP commenced to salvage rails, ties, and bridge timbers. Then late in January came a second and almost as severe flood--taking away most of the salvaged items.

¹ Since records had been kept in Moro, beginning in 1912, never before had there been two days in a row with a total of more than one inch of rain.

Forty-four freight cars had been left stranded, many loaded with wheat. A train had started from The Dalles on the 21st but had been stopped before it turned up Spanish Hollow. In March these cars were removed by truck, the bodies being lifted by crane off of the wheels after the grain was emptied.

The elevators commenced to move some grain by truck. On April 21, 1965 Union Pacific President Bailey wrote Sherman County Extension Agent Thomas W. Thompson that the railroad was not certain about rebuilding but was making aerial surveys. The Sherman Cooperative sought an answer in May but did not get one--except that there would be no service in 1965. The Sherman County Journal, in an editorial written by Giles French, the long-time editor and writer, commented on the good relations with the UP and hoped that the line would be rebuilt. But on July 13, the railroad announced that it would petition to abandon--and in turn was sharply criticized editorially by French. In a letter to Thompson in August, the road explained that the cost of rebuilding was excessive, given the traffic. On August 2 the petition to abandon was filed. Hearings were held at The Dalles in the week of January, 1966, and on June 9, 1966, the examiner filed his report recommending abandonment, which was approved by the Commission.

Background to Abandonment Evaluation: Sherman County Agriculture

Analysis of the abandonment and its consequences requires some review of the nature of agriculture in Sherman County. The county has a land area of 531,000 acres, of which 55 percent is tillable, the highest in the state; the state-wide average is only 8 percent. It is the only county in Oregon to have no timber. The soil is productive but lacking in organic material; the thickness of soil and the quality are best in the

north and much poorer in the south. The rainfall, which averages eleven inches for the county, varies from fifteen inches in parts of the north to ten in parts of the south. The result is that south of Kent and into southern Wasco County, the yields are low, and substantial areas are not tilled, being used only for grazing. Almost none of the land is level, ranging from barely tillable slopes (or ones not tillable at all in some of the canyons) to gentle ones, especially in the Grass Valley area. The elevation ranges from 185 feet at the Columbia to 3,600 feet near Kent. It was discovered in the 1880s that these dry hills could produce wheat effectively only on a summer fallow basis. Each field is tilled only every other year, being allowed to lie fallow after being cultivated in the alternate years. This builds up both moisture and nitrogen content and reduces weeds (but aggravates wind and water erosion).

Agricultural output is shown in Table II.

Traditionally, from the 1880s the county has produced wheat--soft white winter wheat, sown in the late fall, harvested in midsummer. The wheat moves almost entirely to Portland for export to the Far East (Japan, India, etc.). This type of wheat is used primarily for cracker and pastry flour, and, in the Far East, for noodles. At one time considerable hay was grown, mostly to feed horses, and some is still produced. A major change was the sharp increase in production of barley between 1950 and 1970. But this change was a product primarily of Federal crop allocation programs, and as noted later, the trend has reversed. Much of the barley goes to the Willamette valley and to California for livestock feed, and some is exported. Total agricultural acreage has barely changed at all over the years; from 1950 to 1970 the acreage of wheat fell and that of barley

TABLE II

AGRICULTURAL OUTPUT AND ACREAGE IN SHERMAN COUNTY

Year	Agricultural output				Agricultural acreage				Livestock (numbers)			No. of farms	Total value of farm products 000s of \$s			
	Wheat (bu)	Barley (bu)	Oats and rye (bu)	Potatoes (bu)	Value of crops 000s	Wheat	Barley	Oats and rye	Potatoes	Hay	Sheep and lambs	Cattle	Horses	Swine		
1890	148,891	12,811	1,332	5,089	.....	32,445	1,383	323	186	6,080	14,999	3,568	4,212	1,309	373	.....
1900	1,050,400	42,230	34,800	22,589	.....	91,100	1,763	1,774	253	16,729	41,610	3,832	7,027	3,460	545	.....
1910	1,541,092	103,777	43,887	14,633	1,567	122,926	8,359	2,279	256	8,550	9,087	2,558	8,472	3,076	466	.....
1920	2,150,234	35,647	18,099	5,640	4,916	116,924	3,180	1,355	136	11,515	17,161	4,663	8,698	3,443	460	.....
1930	1,838,317	6,458	5,172	2,623	2,020	130,485	380	316	65	5,602	17,073	4,593	4,752	3,132	369	2,344
1935	1,094,125	10,820	11,991	3,798	.....	108,834	681	353	84	18,732	18,322	7,621	4,143	2,693	367	.....
1940	1,900,326	74,788	20,920	386	1,576	92,474	4,406	1,140	10	8,673	8,958	7,994	2,076	3,036	343	1,789
1945	3,047,000	116,229	na	732	3,877	121,342	2,531	na	30	.....	1,701	13,820	1,123	2,296	292	4,516
1950	2,781,985	54,705	6,711	162	5,279	119,003	1,380	166	2	4,759	1,197	11,299	556	1,285	275	5,961
1955	3,254,793	1,268,913	na	467	8,387	96,760	33,988	na	3	6,306	1,879	13,499	543	870	265	9,009
1960	3,456,921	1,593,285	25,977	5	7,609	94,327	41,032	881	4	4,540	1,882	11,072	592	1,360	247	8,422
1962-63	3,266,000	1,310,000														
1963-64	3,540,000	1,210,000														
1964						6,570	93,000	37,000								
1964-65	3,293,000	1,428,000														
1965	3,102,250	1,310,775	6,367	.....	5,454	90,788	38,504	167	.....	3,141	782	13,954	na	1,033	221	6,564
1966						7,411	91,000	35,000								
1967						6,012	121,500	13,000								
1968						5,871	124,000	16,000								
1969						5,433	23,000	27,000								
1970	2,480,503	913,909	4,497	.....	3,710	87,460	31,878	134	.....	9,200	196	9,540	301	1,202	209	4,720
1973																13,264

SOURCE: U. S. Census of Agriculture Volume I: C. C. FD 23761

rose, but wheat output continued to rise up to 1960, and then fell. The increasing total output of grain is attributed to improved varieties (about half) and to increased use of fertilizer and weed control techniques, and better timing of planting and harvesting, with greater mechanization. The wheat yields per acre over the years are shown in Table III, but these figures are somewhat misleading because of intra-county differences. The yield currently varies from 60 or more in a few places in the north in the Wasco area to 10 in a few areas south of Kent, but 36 is typical of the principal areas.

While output value of crops has risen, the number of farms has continued to fall; the total has fallen from 545 in 1900 to 209 in 1970. Thus the average size has risen; the data show an average of 2,650 acres, including range land, but 1,500 is a more typical figure for crop land. Only half of the land is farmed each year, of course. There is a substantial amount of absentee ownership, some farms being operated by owners of adjacent farms, some by strictly tenant farmers. A peculiarity of the farms of Sherman County is that the farmhouses are almost never visible from the roads; the latter follow the ridges, the farmhouses built in hollows to avoid the winds and be close to water.

The decline in the number of farms and mechanization of agriculture have of course resulted in decline in population of the county; the 1970 population, 2,139, is just half of that of 1910--4,242. The effect of the smaller farm population on the towns has been little short of disastrous. The population figures for the towns and for the county are given below in Table IV; Shaniko is included although it is in Wasco County.

TABLE III
YIELD PER BUSHEL, WHEAT, SHERMAN COUNTY, SELECTED YEARS

<u>Year</u>	
1926	19.6
1936	18.3
1946	26.6
1956	32.6
1964	35.8

SOURCE: I. C. C. FD 23761

TABLE IV
POPULATION, SHERMAN COUNTY, 1890-1970

Year	Population					
	Moro	Wasco	Grass Valley	Kent	Sherman County	Shaniko
1890	na	na	na	na	1,792	0
1900	335	322	na	15	3,477	0
1910	378	386	342	125	4,242	495
1920	418	701	317	161	3,826	124
1930	352	400	208	94	2,978	100
1935						
1940	309	303	204	94	2,321	55
1945						
1950	359	305	195	125	2,271	61
1955						
1960	327	348	234	65	2,446	39
1964	339	577	216			
1970	290	412	153	50	2,139	58

SOURCE: U. S. Census Volumes

Wasco has always been the largest town, but had fallen to 400-- compared to a peak of 700. A temporary increase in the late sixties resulted from the construction of the John Day dam on the Columbia. Moro, the county seat, is now down to 290--and much of this population is due to its status as county seat.

The Elevators and the Handling of Grain

As of 1964, the grain elevators in the county, all cooperatives, were as follows:

Sherman County Grain Growers Association, with headquarters in Wasco:

Two elevators, plus those at Biggs and Rufus on the UP main line along the Columbia:

	<u>Capacity</u>
Wasco	685,000 bu.
Klondike	876,000

Moro Grain Growers Association, headquarters in Moro:

Hay Canyon	1,001,000
DeMoss	373,000
Moro	680,000
Erskine	150,000

Grass Valley Grain Growers Association, headquarters in Grass Valley:

Grass Valley	1,380,000
Bourbon	200,000
Kent	792,000

Eakin Cooperative: 114,000

Total, on rail line	6,251,000
Shaniko	358,000
Total	6,609,000

SOURCE: I. C. C. FD 23761

There were a total of 11 elevators and 33 grain warehouses (including Shaniko, from which as of 1964 grain was trucked to Kent for shipment). The warehouses were in part carryovers from the earlier days of sacked grain, but a number were still in use. They were located alongside the elevators, plus additional ones in Nish and Wilcox, which did not have elevators. The estimated investment in the elevators was \$3,115,000. Some were modern poured concrete elevators; others, rectangular buildings.

The wheat was virtually all shipped to Portland for export. The elevators shipped wheat exclusively by rail--as they had since the line was built. Not all of the grain moved out of the county by rail, however:

1. A limited amount was fed to livestock locally.
2. A portion was trucked at harvest time or out of farm storage to The Dalles for shipment by water to Portland. The farm storage capacity in Sherman County was about one million bushels.
3. A portion of the barley was trucked to the Willamette valley, Central Oregon, or California for livestock feed.

For the crop years 1962-63 and 1963-64, and the five-year average, the transport pattern for wheat and barley combined was as follows:

	<u>Output, Carloads</u>	<u>Rail Shipments from the County</u>	<u>% by Rail</u>
1962-63	2,270	1,652	72
1963-64	2,365	1,833	78
1959-64 average	2,195	1,796	82

SOURCE: I. C. C. FD 23761

While the increase in barley production had resulted in some relative shift to trucks, there had been no significant diversion of wheat to trucks or decline in wheat output; the predictions of 1942 of increased truck transport had not been realized. The number of cars for two periods are listed below; figures for the intermediate years are not available:

<u>Years</u>	<u>Carloads of Grain Shipped</u>
1937	1,800
1938	1,230
1939	1,380
1940	1,030
1941	904
1959	1,803
1960	2,235
1961	1,895
1962	1,327
1963	2,260
1964	1,341

SOURCE: I. C. C. Finance Docket 23761. The figures for years prior to 1940 involve a slight degree of estimation.

Thus there was no visible trend; the highest year was 1963. The year-to-year fluctuation reflected the variations in crop yield, the timing of the shipments in terms of the calendar year, and, probably, the relative rail and barge rates, which changed during the period.¹ The increased production of barley, much of which was trucked, was offset by the increasing yield of wheat acreage.

¹ During the 1960s the railroads in the northwest made several efforts to reduce rates to compete more effectively with barges. In 1963 (Grain from Idaho, Oregon and Washington to Ports in Oregon and Washington, 319 ICC 534), the I.C.C. denied most of the requests on the grounds that the proposed rail rates were less than fully distributed cost while barges were the low cost carriers. In 1966 (326 ICC 358), the I.C.C. approved the lower rates on the basis that they would not destroy barge competition.

The country elevators on the line do not buy the grain; they simply store for the farmer and assist him in the sale. The sale is made to the exporters in Portland, technically, directly by the farmer. The same is true of grain trucked to the Interior elevator in The Dalles.¹ The price received by the farmer is the Portland export price less transport and handling costs. Since these elevators are cooperatives, their net earnings are distributed among the farmers on a patronage basis.

As would be expected from the elevator capacity rather than from population, Grass Valley was the largest shipping point on the line, followed closely (for bushels) by Hay Canyon, which has no population at all, with a substantial distribution throughout:

TABLE VI
SHIPMENTS FROM ELEVATORS

Shipping Point	Miles from Biggs	Average Shipments, Millions of bushels, 1955-64	Average Number of Cars Shipped 1959-63	Cars Shipped 1963
Wasco	9.7	32.6	301	369
Klondike	14.2	29.2	208	290
Hay Canyon	19.0	33.1	283	325
DeMoss	23.9	9.8	90	96
Moro	27.0	24.2	243	303
Erskine	31.1	5.6	50	50
Grass Valley	38.5	34.7	357	489
Eakin	43.0	4.1	39	58
Bourbon	45.8	5.1	52	52
Kent	52.5	22.8	245	297

SOURCE: I. C. C. Finance Docket 23761.

¹Cargill does buy grain in The Dalles.

Inbound Traffic

Primarily and to an increasing extent over the years, the traffic on the line was outbound grain. There was no outfreight but grain--in contrast to the picture as late as 1941, when 73 cars of livestock were taken out; this traffic had gone entirely to trucks.

The total number of inbound loaded cars had been as follows:

1941	213
- - - - -	
1959	84
1960	87
1961	37
1962	34
1963	43
1964	36

A breakdown by major category is available 1959-64, as presented in Table VII:

TABLE VII
INBOUND TRAFFIC, 1959-64
CARLOADS

	<u>1959</u>	<u>1960</u>	<u>1961</u>	<u>1962</u>	<u>1963</u>	<u>1964</u>
Agricultural implements	21	12	10	6	10	7
Feed	4	8	8	8	14	11
Dry fertilizer	1	2	0	0	0	0
Anhydrous ammonia (fertilizer)	41	39	7	8	7	8
Petroleum products	7	8	9	7	8	6
Other	10	18	3	5	4	4
Total	84	87	37	34	43	36

The sharp decline from 1941 had primarily been in the handling of petroleum; in 1941 all gasoline and diesel fuel came in by rail; in the 1960s, only a few cars of diesel fuel for Union Oil at Grass Valley. The big drop after 1960, when the traffic fell in half, was the loss to trucks of the handling of anhydrous ammonia, the principal fertilizer used. This is trucked from Portland or Pasco. The loss in petroleum traffic was a national phenomenon as the petroleum industry shifted from rail to truck partly because of the desire to deliver directly to service stations instead of through bulk plants.¹ The extreme unbalance in traffic (characteristic of most branch lines) resulted in the need to bring in large numbers of empty boxcars. The wheat was all handled in boxcars, typically with 60 ton loading; the use of 100 ton hopper cars had not yet begun on any scale in 1964.

Total Traffic

The volume of traffic, calculated in terms of the major points, is slightly short of the volume prescribed in the 1974 D. O. T. report as necessary for a line to be included in the proposed CONRAIL system, but well above the minimum volume regarded by D. O. T. as necessary if a line is to be retained on a subsidy basis. The 1959-64 average was barely above the I.C.C.'s 34 car rule; traffic below this figure is presumptive evidence for abandonment.

Table VIII shows ton mileage per mile of line for each segment; the overall average 1959-63 is 61,219 ton miles per mile of line.

¹The shift occurred on traffic to Prineville in central Oregon only in 1973.

TABLE VIII
TON MILES PER MILE OF LINE, 1959-63 AVERAGE AND 1963

	Miles, Segment	Ton Miles per Mile	
		1959-63 Average	1963
Kent - Bourbon	6.7	14,700	17,820
Bourbon - Eakin	2.8	17,820	20,940
Eakin - Grass Valley	4.5	20,160	24,420
Grass Valley - Erskine	7.4	43,080	54,900
Erskine - Moro	4.1	46,080	57,900
Moro - DeMoss	3.1	61,560	76,800
DeMoss - Hay Canyon	4.9	66,960	82,560
Hay Canyon - Klondike	4.8	83,940	102,060
Klondike - Wasco	4.5	96,420	119,460
Wasco - Biggs	9.7	115,380	142,380
Total ton miles		3,249,620	4,011,180
Average ton miles per mile of line		61,219	75,683

SOURCE: Calculated from tonnage data.

The Line

A more detailed statement of the nature of the line is required as preliminary to discussion of the damage done to it in the 1964 flood. As of 1964, the line was 52.5 miles in length, with used 90 pound rail laid in 1919-23 and in 1951 (on the southern portion, to replace the 56 pound rail), and a small amount of 130 pound rail. The line was unballasted and only partially tie plated. The first portion of the line, from the junction at Biggs to a siding called Thornberry, was by far the most difficult, the line coming up the side of Spanish Hollow on a 3.47 percent grade. The canyon is narrow and the grade was cut into the bank 15 to 20 feet above water level. (The creek has little or no water most of the year.) From Thornberry the grade and curvature was reduced as the hollow widened. The track bisected the town of Wasco, the station located on the main street. Then, instead of heading southwest toward Moro, as does the highway, the line continued southeast to make a great loop; the rail mileage Wasco - Moro was 17.2 miles, the highway mileage 9. The track climbed steadily on a 2.28 percent ruling grade through fairly open country to Klondike, where a major elevator was located; Klondike once had a store and a population of 7; there is now only a house. The climb continued to Sandon; and then followed a two percent down grade¹ --the ruling grade against northbound traffic--into the mouth of Hay Canyon where the latter is joined by Grass Valley canyon. On a spur off the line down into the canyon was located the big Hay Canyon

¹The line was routed via Hay Canyon, despite the grade against the loaded traffic, in part because of efforts of Hay Canyon area farmers to obtain service. The Hay Canyon area was regarded as one of the best wheat areas in the county in the nineties. Some swing to the east was required to avoid the ridge above Wasco.

elevator. Then the line began to climb again, following the narrow canyon of Grass Valley Creek on a two percent grade to DeMoss¹ and Moro, entering the latter on the east side of the business district. The line then followed Barnum Creek southwest past the elevator at Erskine. This was the end of the canyon running; from thence on southward the line followed the undulating hills, with a 2.2 percent ruling grade to Grass Valley, 1.68 on to Kent. In summary, there were 19 miles of one to two percent ascending grade (southbound), nine miles from two to three percent, four over three (all in Spanish Hollow). There were four miles of descending grade southbound between one and two percent, 2½ miles from two to three percent. The remaining 13 miles had grade under one percent, as the line ran along the ridges of the hills above Moro. There were 45 bridges, one a 67 foot girder bridge, most short trestles. There were 165 curves, over three per mile, the sharpest 16 degrees. The elevations of the towns were as follows:

Biggs	170 feet
Wasco	1,266
Klondike	1,547
Hay Canyon	1,288
DeMoss	1,567
Moro	1,798
Grass Valley	2,271
Kent	2,797

Shaniko, the original terminal, was at 3,330 feet.

Despite the lack of ballast, the line in general had been maintained in good condition for the volume of traffic, as is typical of Union Pacific lines. Good drainage minimized maintenance problems.

¹ DeMoss was once a town with houses, stores, churches, etc. Today there is no trace of the town--only the elevator and a roadside park.

The Earnings

The Union Pacific's calculation of earnings for 1963 and 1964 were as follows:

<u>Revenue</u>	1963	1964
Freight revenue arising from the line:		
traffic originating on the line	\$ 387,546	\$ 226,125
traffic terminating on the line	18,550	12,507
Other revenue	1,369	1,530
Total revenue	407,465	240,162

Expenses

On the branch:

maintenance of way	81,920	60,330
maintenance of equipment	4,648	2,998
transportation	49,934	34,929
Total operating expenses	136,502	98,257
Other expenses		
Taxes	16,587	16,655
Equipment rental	7,440	4,827
Miscellaneous	4,855	4,710
Total other expenses	28,892	26,182
Total expenses on the branch	165,394	124,449

Expenses of handling on the main line the traffic originating or terminating on the branch:

using UP operating ratio	210,266	130,913
using ICC 50% rule	165,091	97,782
Total expenses, using UP operating ratio	375,660	255,262
ICC 50% rule	330,490	222,231

Net Income,

Using UP operating ratio	31,805	15,100 def.
Using ICC 50% rule	76,975	17,931

The expenses and net profit or loss figures were calculated in two ways, the first using the Union Pacific's own operating ratio to determine the expenses of handling the traffic off the branch, the second the I.C.C.'s 50 percent figure; that is, one half of the revenue is assumed to be required to cover the out-of-pocket expenses of handling the traffic off of the branch. The net earnings with the two approaches, for the years 1959-1964, are indicated below:

<u>Year</u>	<u>Net, Union Pacific Operating Ratio Basis</u>	<u>Net, I.C.C. 50% Rule</u>
1959	+ 11,379	+ 50,390
1960	+ 86,370	+134,330
1961	- 5,749	+ 31,578
1962	- 47,775	- 20,915
1963	+ 31,805	+ 76,975
1964	- 15,100	+ 17,931

SOURCE: I. C. C. FD 23761

On the I. C. C. formula, the branch was doing remarkably well--compared to most; even on the UP's basis the overall record was not bad. These figures, of course, do not include return on investment. Cost of operation on the line was 4.1 cents (1963) per ton mile.

Train Operations

With the elimination of the line south of Kent and the dieselization, it became possible to make the run to Kent and back within 16 hours, and the overnight stopover was eliminated. In the 1960s the train was operated on call only, rather than on schedule--that is, when traffic warranted. In practice this meant an average of nearly two trains a week; in 1963, 95 trains were operated, of which 86 went south of Moro; in 1964, with lighter traffic, 70 trains, of which 61 went beyond Moro. Under a peculiar feature of the union agreement, Moro was designated as a terminal. If a train went south of Moro, this was an additional trip. Therefore a round trip from The Dalles to Kent involved two days pay (but of course required nearly 16 hours as a rule). A six man crew was utilized.

Of these trains, in 1963, 59 utilized two engines and 36, one; in 1964 the figures were 37 and 33. The diesels used on the lines were GP 7s or 9s, or F 7s or 9s. The 9s could pull 525 tons, or 21 empties, up the ruling grade in Spanish Hollow; the 7s, 15. The 9s could bring 1,000 gross tons or 11 loaded cars up the two percent grade from Hay Canyon to Sandon. Thus 22 cars were the most that could be brought out from points south of Klondike. In 1964, agents were still being employed at Wasco, Moro and Grass Valley; in that year all except the Moro agency were closed.

The Rate Structure

The rate structure was basically different from that affecting most traffic on branch lines, a feature significant for the effects of abandonment.

The rates varied with the distance from the Columbia:

	<u>Miles from Portland</u>	<u>Cents per cwt</u>	<u>Cents per Ton Mile</u>
Biggs, on the main line	104	11½	2.2
Wasco	114	13	2.3
Klondike	118	14	2.4
Hay Canyon, DeMoss, Moro	122; 128; 131	14½	2.2 (Moro)
Erskine, Grass Valley	135; 143	15½	2.2 (Grass Valley)
Eakin, Bourbon, Kent	147; 150; 157	16½	2.1 (Kent)

SOURCE: I. C. C. FD 23761

Thus rates per ton mile were approximately the same to all points, including Biggs on the main line. These are relatively low rates for the distances involved; as noted, in the 1920s the rates were twice as high. Incoming freight coming over longer distances was subject to blanket rates; the rate to points on the branch were the same as to main line points in the area.

The Abandonment Decision

The written and oral testimony on the abandonment application were very detailed and contain extensive information on the line.

The Union Pacific built its case around the flood damage and the amount of money required to rebuild the line.

The primary damage was in two sections:

1. Milepost 0 (the junction at Biggs) to milepost 4.75 near Thornberry-- the section in Spanish Hollow. Most of this line had been torn out completely-- rails, ties, roadbed, bridges, and grade were gone; there was hardly any trace of the railroad at all.

2. Milepost 19 at Hay Canyon to milepost 26 near Moro. In this section Grass Valley Creek had done similar damage, taking out the grade as well as

track and bridges. The Union Pacific's chief engineer stated that this was the worst damage he had ever seen on a Union Pacific line.

In total 8½ miles of line were destroyed, and 24 of the 26 bridges on these two segments. Some damage was done to other portions, but this was relatively minor. The Union Pacific made its own estimate of the cost to rebuild and had a separate estimate made by an engineering firm. The Union Pacific's figure was \$1,615,000 as a minimum to rebuild at the same elevation as before. Of this, the Spanish Hollow section would account for \$930,000. The engineering firm's estimate was \$2,294,000. But to rebuild on the old grade level was regarded as folly because of the danger of repetition of the flood. The problem in Spanish Hollow has been aggravated by the rebuilding of Highway 97, which had reduced the space available for the creek. To build on a ten foot higher grade would impair the clearances of the highway overpasses; to rebuild the highway bridges would cost another \$1.5 million.¹ To make matters worse, immediately following the flood, U. S. 97 was rebuilt in such a way as to encroach still further on the canyon and even the railroad right of way.

The Union Pacific argued that the potential earnings from the line did not justify this amount of outlay, and given the nature of the area, there was no possibility of increase in traffic. On the I. C. C. formula the earnings had averaged \$48,000 per year over the preceding five years; the length of time necessary to recover the investment, 22 years, was regarded as excessively long. The railroad argued, further, that the traffic could be handled adequately by truck--and used as evidence the fact that the 1965

¹ A case could be made that the state could appropriately bear this cost, since its action in widening the road grade had aggravated the damage to the railroad.

crop had been handled successfully--though admittedly the crop was less than normal. The Union Pacific was of course also aware of the growing importance of farm storage, now estimated at one million bushels capacity in the county, and the tendency to truck from farm storage directly to The Dalles for water transport. While the tonnage thus moved had not seriously affected traffic on the line thus far, the potential was great. The gain to the Union Pacific from retention of the line was of course less than it might otherwise have been because of the relatively short main line haul and the relatively low rates. The long period the UP took to come to the conclusion not to rebuild probably reflected differences of opinion among various persons in the company involved in the decision.

The protestants included the grain cooperatives; the Pacific Northwest Grain and Grain Products Association, an organization of grain cooperatives; the U. S. Department of Agriculture; the Oregon Public Utilities Commission; local groups; and, as always, the labor unions.

However, the county was less united than in 1942. The management of the Moro Cooperative had long believed that trucking of grain to the Columbia and thence shipment by water offered advantages; the manager was a director of North Pacific Grain Growers Association, which was encouraging water transport. Accordingly the Moro Cooperative, while opposing the abandonment, did not fully join in the fight, which was, it is reported, primarily a Wasco effort. The task was also more difficult; there was no war emergency; trucks were more readily available; and there was some feeling that the task was hopeless, given the washout.

The basic arguments centered around several points:

1. The cooperatives had continued to use rail service almost exclusively; the traffic had not decreased over the years.
2. The line was not unprofitable by the Union Pacific's own figures; the investment would be recovered in time, and the railroad had entirely adequate funds with which to rebuild.
3. The costs of rebuilding to the old standards were overstated.
4. Substantial injury would result to the cooperatives and the farmers of the area in several ways:
 - a. Cost of transport.
 - (1) The costs of handling grain would be increased; the combined truck and rail rate would be higher than the old rail rate even with the rate

concessions made by the Union Pacific. The combined rail motor rates as compared with the old rail rates for major rates would be as follows:

Shipping Point	Cents per Cwt	
	All Rail Rate, 1964	Rail-Motor Combined Rate
Wasco	13	17
Klondike	14	17½
Hay Creek	14½	18
Moro	14½	18½
Grass Valley	15½	21
Kent	16½	23

The total cost additional per year was estimated to be \$91,725. This analysis assumed that the traffic would move truck-rail, whereas the truck-barge rate was lower.

(2) Additional costs of rehandling at the Columbia, estimated at \$75,411.

(3) The elevators would require readjustments to facilitate shipping of grain out by truck rather than rail on other than a temporary basis. One estimate of cost was \$162,137.

(4) New facilities would be required on the Columbia River for transhipment by water or rail, estimated cost of \$94,000.

(5) Surfacing of roads to elevators not having such roads, \$105,000.

Thus a total capital outlay of \$361,137 would be required, and additional annual costs of \$167,136.

b. There would be incidental disadvantages to the farmers and the cooperatives, centered around the loss of "orderly marketing."

(1) The elevators might lose their certification.

(2) Payment to the farmers would be delayed, since drafts could not be drawn on the grain until it was loaded into railway cars.

(3) There would be less certainty about rates and transport costs; no longer would there be a posted rail price.

(4) Concern was expressed about the availability of motor transport as required for immediate delivery of grain sold in large volume, and year-round availability. Some elevators would occasionally move as much as ten cars in one day.

(5) Competition between rail and motor transport for moving the grain would be lost.

(6) Farm storage would increase, lessening the need for the country elevators.

(7) Some inconvenience would occur in obtaining CCC loans, which were based on on-rail prices.

The net effect would be loss in convenience of shipping; loss in the value of the elevators, which would play a less important role in grain handling; and reduced net return to the farmers due to higher transport costs.

One is impressed by the high quality of the briefs and the testimony, with a minimum of the usual irrelevant nonsense that is often presented in such cases.

The Effects of Abandonment: Grain

As soon as it became apparent that the line could not be back in service for the year of 1965, the elevators commenced to move the grain by truck to the Columbia. The Union Pacific, in an effort to lessen the problems

of the shippers and the opposition to abandonment lowered the rate from Biggs on motor-rail shipments from 11 cents per 100 pounds to 8½ cents. But much of the grain went by barge on the Columbia. Even so the total costs were higher at the moment; for about one million bushels of C.C.C. grain, the additional costs resulting from trucking were estimated to be \$24,702, or 2.3 cents per bushel. The Union Pacific then lowered the rate again, to 7 cents on combined shipments and about 700 cars moved out by rail, about one-third of the figure previously moving.

Once it became evident that the line would not be rebuilt, more permanent steps were taken:

Moro and Grass Valley: MIDCO: Early in 1966, Moro Grain Growers Association built a new elevator on the Columbia River at Biggs (it had no elevator at this point previously), to permit barge loading and trucked all grain from its country elevators to this river elevator for shipment by barge to Portland. The elevator has a capacity of only 220,000 bushels; the wheat is stored in the country elevators and then moved to the river when particular amounts are sold, to accumulate for a barge load. A barge holds 50,000 bushels, the equivalent of 25 boxcars, and can be loaded in 11 hours. The wheat is all handled in bulk and thus loaded and unloaded mechanically.

The Grass Valley Cooperative at first built a temporary rail loading facility at Biggs and trucked to that point. Shortly it began to ship through the Moro facility. On June 1, 1973, the Moro and Grass Valley cooperatives were merged to form MIDCO (Mid Columbia) Grain Growers Association, with headquarters in Moro. Currently MIDCO has one truck and trailer of its own, holding 26 tons, and contracts for the use of two additional trucks and trailers as needed to meet peak demands; it cannot keep more than one truck busy at all times.

MIDCO's own truck costs are about 10 percent less than the contract rates. The costs (1974) are shown in Table IX:

TABLE IX

COSTS OF SHIPPING GRAIN TO PORTLAND FROM MIDCO ELEVATORS, 1974
RATES PER 100 POUNDS

<u>Origin</u>	<u>Contract Truck Rate</u>	<u>Cost, Own Truck (approx.)</u>	<u>Barge Rate Biggs-Portland</u>	<u>Total Rate¹</u>	<u>1964 All Rail Rate</u>
Kent	9.25	8.3	8.2	17.45	16.5
Grass Valley	6.5	5.9	8.2	14.7	15.5
Moro	4.8	4.3	8.2	13.0	14.5
Hay Canyon	4.3	3.6	8.2	12.5	14.5

¹With Contract trucks

SOURCE: Provided by MIDCO Grain Growers Association

Thus, except for Kent, the total cost of shipment is less now by truck-water than it was by rail. For Moro, for example, in terms of bushels, the truck-boat figure is 7.8 cents; truck and rail, 9.2 cents; the old all rail rate, 8.7 cents. Only for Kent, with its relatively long trucking haul, is the overall cost higher. The trucking costs per ton mile are as follows: Kent, 3.6; Grass Valley, 3.3; Moro, 3.6; Hay Canyon, 4.5, using the rail mileage. Using the road mileage (which is shorter), the figures are: Kent, 4.6; Grass Valley, 4.8; Moro, 5.6; Hay Canyon, 5.4. These truck costs are higher than the rail rate differentials under the all rail rates;

it is the lower barge rate that makes the combined figure lower.¹ The cooperative did add some investment, at the river elevator, in its other elevators, and for the purchase of a truck, to offset this differential in part.

In summary, then, essentially the abandonment of the line prodded Mori Grain Growers into doing what it could have done anyway and might have done ultimately. For an outlay of perhaps \$300,000 in total--or an annual cost of perhaps \$18,000 at 1964 interest rates--the effect was to save, on all traffic except from Kent, a considerable sum of money--perhaps on the average 1/2 cent per bushel, on 3 million bushels, or \$150,000 annually.

Sherman Cooperative: The Sherman Cooperative followed quite a different policy. Sherman already owned an elevator at Biggs on the river, which handled the grain from its members relatively close to the river. This elevator had once been located on the river itself; when the John Day dam was built, the Sherman directors thought that there was danger of the elevator being flooded, so the Army Corps of Engineers moved it inland across the Union Pacific tracks, leaving it with only rail and truck access. Interstate 80 is now also between it and the river. Thus Sherman ships entirely by rail, bringing the wheat from its Wasco and Klondike elevators by truck. Its truck and rail costs are as follows:

<u>Origin</u>	<u>Contract Truck Rate, per 100 lbs.</u>	<u>Rail Rate</u>	<u>Combined Rate</u>	<u>1964 All Rail Rate</u>
Wasco	3.3	11	14.3	13
Klondike	4.2	11	15.2	14

¹ The truck costs are somewhat higher than the rail costs per ton mile of operating the branch, exclusive of return on investment.

In terms of bushels: the rail rate to Portland is 6.6 cents; the truck rate, 2 cents from Wasco, $2\frac{1}{2}$ cents from Klondike. The comparison with the previous all rail rate is somewhat misleading because of the increases in rail rates that have occurred generally since 1964; with the rate reductions made by the Union Pacific in 1965 (since offset by general rate increases) the cost of the combined truck-rail movement was not greater than the previous all rail movement. The net result of using rail, however, is that a somewhat greater cost is being incurred at present than the truck-water cost; but the cooperative estimates that the differential over water, all elements considered, is not over $\frac{1}{2}$ cent a bushel. This is not regarded as serious and the Sherman Cooperative is satisfied with the present transport system. The Cooperative does not own its own trucks but contracts for this work. When grain is being shipped from Biggs and Rufus, five miles east, the cars are dropped off in the early morning by the local freight that works the Condon branch and picked up loaded in the late afternoon. All shipments now go in hopper cars, C3 and C4, handling 4,000 bushels. These eliminate the need for grain doors and the leakage through holes. The Sherman attitude is that if there was access to water the cooperative would ship by both rail and barge, but the gains from shifting to barge do not warrant the investment necessary to do so.

Thus, as the situation now stands, the grain handling in Sherman County is roughly as follows:

1. The largest portion of grain, that coming from MIDCO, is trucked to Biggs and moves to Portland by water.

2. A second segment, perhaps 750 cars a year on the average, is trucked to Biggs and Rufus and moved by rail to Portland.

3. A third segment, perhaps as much as one million bushels per year, is trucked to The Dalles for direct water shipment, through Interior Elevators, which leases the large river elevators from the Port of The Dalles, or through Cargill. Some of this grain comes down at harvest in farm trucks (perhaps 5 percent). Most of it is hauled out of farm storage by commercial truckers. Interior also receives grain by truck from farm storage in central Oregon, from the portion of Washington directly north of the Columbia, and by truck and rail from eastern Oregon and Washington and Idaho, and by rail from Montana and the Dakotas.

4. Some barley is trucked to the Willamette valley for livestock feed and some to California at low back haul rates; it cannot move by truck in competition with rail at regular truck costs or rates.

It should be noted that little or no grain is trucked to Portland for export or for flour milling. There are two reasons: the much higher cost of trucking than the cost by barge and the existing rail rates, combined with the unsuitability of handling wheat as a back haul; and the very limited facilities for dumping of trucked wheat for export at Portland. The flour mills in general do not handle grain or flour by truck in the northwest; the grain comes in by rail, is milled, and goes out again by rail on transit rates.

The net effect, therefore, of abandonment on the major crop of the area was in fact negligible and in a way was beneficial by prodding Moro (now MIDCO) to build an elevator at the river. Grain acreage was about the same in 1973 as in 1960. The crop on the whole moves at rates that do not differ sharply from those that would exist if the rail line were

still in place; any differential, some favorable (Moro), some slightly unfavorable (Kent, and Wasco-Klondike) is not significant, given present prices for wheat. Some additional investment by Moro and a small amount by Sherman was required, but this also was relatively small. But the failure of the abandonment to have significant results for the particular crop was due to several special circumstances:

1. The availability of cheap water transport, more or less equally suitable for the purpose.
2. The effect of water transport in keeping rail rates relatively low.
3. The relatively short distance the wheat moves--not over 150 miles--coupled with the nature of the railroad rate structure on the line, the rates rising with distance from Portland. Had a single blanket rate applied to the whole area, the shippers from southern Sherman County would have been seriously affected by having to absorb the trucking costs.
4. The cheapness of transferring grain from truck to barge or rail car mechanically.

Had these conditions not been present, the economic injury to the area in the form of higher transport costs would have been substantial.

Evidence of lack of effect is provided in Table II; agricultural acreage has risen since the abandonment. The recent shift back to wheat from barley reflects the end of allotments and relative cost-price ratios.

The fears of the shippers about the nonavailability of trucks, the effects on the roads, and the loss of "orderly marketing" proved to be illusory. Admittedly it was simpler to fill the grain cars at the elevators. But the cooperatives have been successful in moving the grain to the river

by truck without trouble; grain is moved first from elevators such as Klondike before the rural roads are affected by the weather. But an additional outlay of \$184,000 proved to be necessary on the county roads.¹ Additional road maintenance cost is hard to estimate. The major highway, U.S. 97, is built to high standards and carries long distance trucking. It is not congested and negative externalities from trucking are minor, limited to the loss of time to motorists who get caught behind grain trucks on the curves.

If, however, the export markets were lost and the wheat began to move east by rail, the loss of the line would prove to be more serious. Even so, the grain can now be trucked to the UP main line at little or no greater real cost than the previous rail movement--but the shippers would lose the advantage of blanket rates which would likely apply to all points in central Oregon, as do the rates on lumber.

Grain from Maupin and Madras elevators, which take in grain from southern Wasco County and a limited amount from Sherman County, moves by rail out of the elevators to Portland, as a cost roughly the same as the combined truck-barge rate would be. It could move equally well either way. A substantial amount of grain from farm storage in the Madras-Maupin area is trucked to The Dalles for direct shipment by water, rather than moving through the elevators and by rail. Wheat from the Condon area directly east, east of the John Day River, moves primarily by rail but some from farm storage into Arlington by truck and some through the MIDCO elevator at Biggs. Thus, if the Grass Valley line were still in place, most of the Sherman County grain would likely still move by rail; there is little difference in cost between the two methods.

¹Letter from Sherman County Road Department, July 16, 1974.

The Effects: Inbound Traffic

As noted, the inbound traffic had dwindled to the point at which it constituted only about two percent of total traffic. Gasoline had already transferred to trucks, and the remaining diesel fuel traffic of Union Oil was easily transferred. In more recent years this traffic has been shifted even at points still having rail service in central Oregon (e.g., Prineville). The same happened with the fertilizer traffic. The inbound feed traffic was affected to some extent. For example, MIDCO averages about $1\frac{1}{2}$ cars a month from the Ralston Purina mill in Spokane. This has to be trucked from the Columbia River rail points with, in the past, somewhat higher total cost; larger trucks now make it possible to truck directly from Spokane at less than the old rail rates. But on the whole, consequences for inbound traffic were nominal; the total coming in was small anyway, and the major items had shifted to trucks--as would not have occurred with fertilizer if it had been dry fertilizer blended in the county.

Unlike in many abandonment cases, there was no complaint of poor service causing loss of traffic; shippers were well satisfied with the Union Pacific's service.

Incidental Adverse Effects on the Area

It is difficult to discover significant adverse effects of the abandonment. Somewhat fewer men are employed loading freight cars--but this change would have occurred anyway as the traffic shifted to hopper cars, as it would have in the late sixties. The loss of other railroad personnel--four agents, the nine section workers and their families, added to the

decline in population and buying in the area; these apparently were not offset by an equivalent increase in the trucking industry. There was, of course, some increase in employment in trucking, purchases by trucking employees who live in the county, and purchases of motor fuel and supplies. The jurisdiction lost about \$9,000 in taxes (but other Oregon jurisdictions received larger amounts; the total tax bill of the Union Pacific was undoubtedly not reduced by this amount, given the methods of valuing railroad property for tax purposes in Oregon). The newspaper lost the advertising that the Union Pacific does in the areas it serves--and the crew no longer ate lunch in the county. There has been, probably, some adverse psychological effect; the loss of the railroad was one more step in the long decline of the towns in the county. As noted above, the towns have lost population for decades--and even persons most loyal to their home county can hardly call their towns appealing. Kent (like Shaniko) has almost achieved ghost town status and Grass Valley is scarcely a viable economic unit, its population down to less than 150. Moro and Wasco do have a few attractive homes, a few cafes, gas stations, small stores, plus the elevators; Moro has a weekly newspaper and a bank, which Wasco lacks. But Moro is supported primarily by the fact that it is the county seat. Both towns have numerous boarded up store buildings, with more vacant lots than houses in many blocks.

The loss of the railroad, as indicated, is just one more symbol of economic decline¹ and the loss eliminates any hope of future industrial development that requires rail service. But one cannot help but feel that the chances of such development were slight. Some persons did have a certain sentimental attachment to the line--sometimes referred to as "Old Sage Brush Annie"--long the area's lifeline to the outside world.

The loss of the railroad to Shaniko in 1943 was, while inevitable, more significant; eventually the elevator and warehouse were abandoned, the grain moving from the farms or farm storage either to Maupin, on the main railway line down the Deschutes, to Kent, or all the way to the Columbia by truck for water transport. Shaniko lost its economic significance when the Deschutes line was built; it gradually deteriorated, and the ending of the rail line was the final blow. It is essentially a ghost town--in fact, attempts have been made by the few residents to capitalize on this as a tourist attraction. There are few more desolate spots in Oregon than the Shaniko plateau and it is hard to lure anyone for any purpose. The old brick Columbia Southern Hotel, famous in the earlier days, still stands, as do the abandoned warehouse and elevator--but not much else.

Was the Abandonment Justifiable?

The 1942 application to abandon the entire line--perhaps, as noted, prompted by considerations other than strict profit maximization--was clearly unwarranted, and the I. C. C.'s decision rejecting it was economically

¹Ironically, Sherman County has one of the highest per capita incomes of the Oregon counties. The farmers do well--but the towns do not.

correct. The line, by the Union Pacific's own figures, had been earning up until 1940, when the war interfered with export markets, an average of \$26,000 a year, over the period 1937-39. This figure, of course, involves some arbitrary determination of costs of handling the branch line traffic on the main line. The salvage value was estimated to be \$230,000; the old steam locomotive at the maximum was worth \$25,000. Thus annual earnings of only \$15,300 (at 6 percent) were required for the line to cover all of its economic costs, and the actual earnings were well in excess of this. But the Kent-Shaniko portion was without doubt offering inadequate traffic to warrant continued operation, although exact figures are not available. The 17 miles of line served only the one elevator at Shaniko, which in turn served only about 25 farmers. The possibility of trucking to Maupin and Kent, though at some higher cost, made retention of the segment unwarranted, especially since Shaniko offered no future traffic potential.

As of 1964, the situation as to the remaining line is more difficult to assess.

If it is assumed that the current picture remains unchanged, so that the time factor can be eliminated, the basic formula for evaluating the desirability of retention of a railroad line, from the standpoint of the railroad is as follows:

$$G_{rs} = (R_b + R_s) - (C_b + C_s)$$

where: G_{rs} = net gain to the railway system. The line will be retained if G_{rs} is positive.

R_b = revenue arising from operations on the branch

R_s = additional revenue to the remainder of the system due to traffic originating or terminating on the branch that will be lost if the branch is abandoned.

C_b = costs due to the operation of the branch that will be eliminated if the branch is abandoned, including an interest return on the salvage value of the line and equipment used.

C_s = costs to the system of handling the branch-created traffic off of the branch (costs that will be eliminated if the branch is discontinued). This is difficult to ascertain; the I. C. C. uses a 50 percent rule--that half of the revenue received from this traffic represents out-of-pocket cost of moving it on the main lines.

If this formula is applied to the line, the results are as follows. The net gain for the five-year period 1959-63 was \$48,000 a year before return on salvage value is considered. The Union Pacific's estimate of salvage value after costs of removal was \$206,000. The two diesels on the line were worth perhaps \$400,000; if 40 percent of this is assigned to the line, the figure is \$160,000, and the total relevant investment \$366,000. Thus return at six percent on the entire salvage value was \$22,000. Continued operation was clearly warranted--prior to the flood damage. The minimum estimate of the cost of rebuilding was \$1,615,000. This sum plus the salvage value of \$366,000 would have provided a base of \$1,981,000; at six percent, annual

earnings of \$119,000 would have been required--compared to an actual figure of \$48,000. Thus, G_{rs} was a negative figure of \$71,000.

Thus the necessary earnings--accepting the Union Pacific's figure of costs and expenditures--exceed the earnings of the previous years by about \$70,000 a year. There was no expectation that the revenue could increase significantly. The grain traffic had remained steady for several decades, apart from year-to-year fluctuations, increasing crop yield being offset by greater barley output (much of which was trucked) and by more trucking out of farm storage. It did not appear that either of these trends would be reversed, and there was always the danger that more would move by the truck-water route. Much of the inbound traffic had been lost to trucks, and there appeared to be no chance of increase. This traffic had never been significant at best. Thus, given the lack of expectations of improvements in revenue the company was clearly justified in not rebuilding, even though it had adequate funds to do so.

From the standpoint of society as a whole, however, the abandonment decision equation must be modified: retention is justified if G_N is positive, with the equation

$$G_N = [(R_b + R_s) - (C_b + C_s)] + Sh + N_{sys} + Dr + Ex$$

in which: G_N = net gain to society

Sh = "shadow price" adjustment: adjustment of costs to reflect the difference between real economic costs and costs actually incurred.

N_{sys} = net contribution of traffic created by the line to the national railroad system as a whole.

Dr = additional amounts shippers would be willing to pay, over existing rates, to keep the line in operation.

Ex = value of externalities--gains to persons other than those actually using the line.

In this case, these items are as follows:

Sh: The costs of train operation were higher than necessary because a six-man crew was used; four men were clearly adequate for efficient operation. The difference was perhaps \$8,000 a year.

N_{sys}: Since very little of the traffic (a few inbound cars) moved over lines other than the Union Pacific, this figure was negligible.

Dr: While the elevators were anxious to keep the rail line, clearly they were willing to pay very little more to do so--given the availability of other forms of transport.

Ex: Externalities. Given the other items in the equation, externalities of a value of \$63,000 per year would have been required to justify continued operation of the line.

$$G = -71,000 + 8,000 + 0 + 0 + Ex$$
$$Ex = 63,000 \text{ if } G = 0$$

The principal externality to the area as a whole was that of keeping the wheat trucks off the highways. The gain from this is difficult to quantify, but value judgments suggest that the negative externalities from the grain trucks are not very significant. Thus, the only justification would have been the overall prestige externality of avoiding one more blow to an area that in some ways was declining, and retention of the line for possible future industrial development or in the event of change in the direction of traffic flow of wheat. But the possibility of

subsidization or of the county taking over the line (which it could have purchased for salvage value or even less)¹ was certainly not seriously considered and apparently not considered at all (despite the example provided by Prineville, 100 miles to the south, with its long and successful operation of a railroad). The value judgments of persons in the county were obviously the same as the author's: that subsidization out of tax revenue of \$60,000 a year--and possibly more--was simply not warranted, given the alternative transport forms available.

¹The Union Pacific might have given the county the line if it were to be kept in operation.

THE GREAT SOUTHERN RAILROAD

To the west of Sherman County is Wasco County, which once covered all eastern Oregon and parts of what is now Idaho, gradually carved down to its present size. It is a much more diverse county than Sherman, some portions much more fertile and well watered; other portions covered with forest, still other segments, near the Deschutes, resembling Sherman. The county seat is The Dalles, long a major commercial and transport center for central and eastern Oregon.

Building of the Railroad

Around the turn of the century, several plans developed for building a railroad south from The Dalles, but not until 1904 was construction actually undertaken. The immediate aim was Dufur, 15 miles south of The Dalles by road, center of a major agricultural area, primarily wheat. A secondary objective was the timber of Mt. Hood National Forest, southwest of Dufur. There was also some thought of building into central Oregon, but the great obstacle of Tygh Ridge and the need to cross the Deschutes were discouraging factors, and the building of the Deschutes River line put an end to this speculation. Service was opened to Dufur, November 30, 1905. In 1912-13 the line was extended 11 miles to the village of Friend, in the timbered country between Tygh Valley and the valley of Fifteen Mile Creek. The line was built by John Heimrich, Sr., who had made a fortune in Colorado mining and moved to the northwest, making investments in a number of fields. But the road was run by his son John, Jr. and the railroad from the beginning to end was almost synonymous with John Heimrich, Jr.

To avoid the hills south of The Dalles which the stagecoach road and modern highways crossed, the railroad followed Fifteen Mile Creek on its

long circuitous path to Dufur, swinging far to the east, close to but high above the Deschutes, between rough and jumbled hills far more tortuous than those of Sherman County. The rail mileage to Dufur was thirty, twice the road mileage. When the extension was built to Friend, the line left the valley and climbed steadily up the ridge southeast of Fifteen Mile Creek, from about 1,000 feet at Dufur to 2,500 feet. The shops were originally located in Dufur, and the daily train came down to The Dalles in the morning, back in the evening. Later the shops were moved to The Dalles. Regular passenger service ended in 1928 with the end of the mail contract. The grading was limited; new 60 pound rail was used, with little ballast. The cost was about \$585,000.

In addition to Dufur and Friend, there were several small villages on the line, Petersburg, Wrentham, Emerson, and Boyds being the most important, with grain elevators and warehouses. Only Dufur remained a town of any magnitude; population is indicated below:

1900	336
1910	523
1920	533
1930	382
1940	392
1950	422
1960	488
1970	493

The principal elevators and source of traffic were at Dufur. From beginning to end the primary traffic was wheat, although in time some lumber and log shipments were carried. A small lumber mill was built at Friend. The hope of the period around 1900 that the area would become a

major fruit producer failed; rainfall was inadequate and in time the vast orchards were torn out. The north on fringe of the county produces large quantities of sweet cherries, but not in the area the railroad served.

Traffic, revenues, expenses, and profits for selected years are shown in Table X.

Financial Difficulties

In the earlier years the road did reasonably well; it did not cover interest in most years, but the bonds were held primarily by the stockholders. After 1921, however, tonnage and the passenger traffic and revenues commenced to fall as trucks and cars took over the merchandise traffic and the passenger business. With the elimination of passenger train service, the road was able to restore operating profits, but unable to cover property taxes, on which it commenced to default in 1926. The hope always lay in greater lumber traffic, and in 1926 Heimrich concluded a contract with the Forest Service for the cutting of two billion board feet of timber in the Mt. Hood National Forest, and construction was started on a lumber mill on the line and the Union Pacific three miles east of The Dalles. The logs would be brought down by rail. Before the mill was finished, lumber prices fell; the mill was left unfinished (and became a dance hall), and Heimrich eventually lost his Forest Service contract, despite the efforts of The Dalles Chamber of Commerce to save it. The railroad struggled on, but a series of unfavorable events were to destroy it. The physical condition of the road deteriorated and service became unreliable; the farmers, desperately hard pressed by low wheat prices, began to truck their wheat to The Dalles for shipment by water. In 1932 the road carried only one-third as much wheat as in the previous year. For that year the ton mileage per mile

TABLE X

TRAFFIC AND REVENUE, GREAT SOUTHERN RAILROAD, SELECTED YEARS

<u>Year</u>	<u>Operating Revenues</u>	<u>Operating Expenses</u>	<u>Net Revenue from Railway Operation</u>	<u>Net Income</u>
1905-16 average	\$45,331	\$24,096	\$19,601	
1921-30 average	52,207		15,257	\$- 30,121
1921	97,909	59,351	31,577	- 21,051
1924	65,678	52,170	4,549	- 22,588
1925	39,321	53,547	-19,976	- 54,115
1926	42,168	28,892	5,938	- 28,277
1927	40,941	26,186	7,328	- 27,083
1929	33,093	18,686	4,916	- 5,091 ¹
1930	20,223	23,078	- 1,855	- 9,225 ¹
1931	16,008	9,942	6,066	2,294 ¹
1932	5,755	6,588	- 833	- 4,539 ¹
1933	7,974	10,064	- 2,110	- 3,728 ¹
1934	9,556	9,296	- 266	- 1,545 ¹
1935-6 mos.	2,700	4,200	- 1,400	- 2,700 ¹

¹No interest paid

TONNAGE BY TYPE OF COMMODITY

<u>Year</u>	<u>Wheat</u>	<u>Fruit</u>	<u>Petroleum</u>	<u>Forest Products</u>	<u>Total</u>
1921	30,306	ns	ns	2,477	34,039
1924					26,381
1925					12,856
1930	12,078	114	175	ns	12,849
1931	12,204	13	0	ns	12,440
1932	3,875	0	144	ns	4,051
1933	5,483	14	151	ns	5,674
1934	6,739	107	38	ns	6,895

ns - not reported separately

SOURCE: Interstate Commerce Commission, FD 10880
and Statistics of Railways, Annual

of line was only about 3,000--an incredibly low figure. The track was so bad that it was difficult to keep rains on the track. The road was soon down to two employees, Heimrich himself doing much of the work.

Further complications arose when Heimrich's sister, Rose Hull, sued him for 1 share of the father's estate; when John Heimrich, Sr. died in 1911, he left the estate in trust, with John, Jr. as executor for 15 years. Mrs. Hull's suit was successful, and she received all of the stock in the railroad and \$800,000 of bonds. In November of 1932 it was announced that her husband, S. A. Hull, a Portland lumber man, would take over the road, obtain a new Forest Service contract, and build a box factory in The Dalles--meanwhile improving the railroad. Some improvements were actually made and on April 6, 1933, the new management announced the establishment of joint rates with the Union Pacific, lowering the grain rate to Portland to 13½ cents a hundred. In 1933 and 1934, operation was spasmodic, but grain was moved out in larger quantities and petroleum moved in.

But the line was also plagued by defaulted property taxes--now in default since 1926. In January, 1932, the county brought suit to collect \$37,000 in unpaid taxes, and the County Court gave title to the county in August. But the county made clear that it did not want to force the line to suspend, but wanted to insure that operation would continue. Concern was expressed in The Dalles over inconvenience to the elevators from loss of the line and about the fact that if the railroad were abandoned, the chances of a lumber mill in The Dalles would be greatly reduced. In June of 1933 after Hull had taken over, the county agreed to accept \$5,814 for its \$34,000 tax lien. In October of 1933 at foreclosure suit, the road was awarded to the bondholders--and the road was reorganized as The Dalles and

Southern--but this in fact was a technicality, as the Hulls held the bonds. The attempts to get funds to rebuild the line and pay off the county dragged on for two more years; the road operated occasionally to haul out wheat. An attempt to get an RFC loan failed in July of 1935 on the grounds that the prospects of the road were too poor.

In that month, Hull indicated that he planned to junk the line and applied for permission to do so. He argued that the line could not be operated in its present shape; the \$50,000 to rehabilitate it could not be raised; and that the line would not be profitable anyway. Accordingly, in August, to prevent Hull from selling the line for junk, the county again filed suit to foreclose. Following the granting of I. C. C. approval to abandon (decided September 30, 1935), Hull announced that all service would end April 30, 1936. Finally on August 13, 1936, the county agreed to accept \$35,134 from Hull to clear away the lien, having given up all hope that operation could continue, and a contractor began to scrap the line.

There were no protests for the request to abandon; the only initial objection came from firms served by a spur line in The Dalles that would be left without service. The firms involved bought this track and deeded it to the Union Pacific, which still operates it.

The Effects of Abandonment

The immediate effects were not great. Much of the Dufur area wheat was already being trucked directly to The Dalles. The elevators in Dufur suffered some loss because trucking of grain from the elevators was somewhat more expensive than rail, but the difference was not great. At about this time the Dufur elevators collapsed and were rebuilt on higher ground away from the railway right of way. The enterprise, a corporation but farmer-

owned, continues to function as a commercial elevator, the grain trucked primarily to Interior Elevators and Cargill in The Dalles for shipment to Portland by barge. Grain from the Wrentham-Petersburg area all goes directly to The Dalles, either at harvest or out of farm storage. Between Dufur and Tygh Ridge, about 40 percent goes into farm storage and thence directly to The Dalles; about 60 percent into the Dufur elevator. In southern Wasco County, beyond Tygh Ridge, some wheat goes directly to The Dalles, the rest to the elevator on the rail line at Maupin (owned by Interior Elevators). The other elevators have ceased to be commercial elevators; the ones at Rice and Emerson are used for farm storage by the owners, while the one at Boyds is unused.

The significant effect of abandonment, however, and one clearly foreseen, was the effect upon the future location of lumber mills. The Dalles did have a mill for a time, but it was abandoned after a few years, partly because of problems of getting the logs in. If the railway had stayed in operation, the mills might have located in the Friend area or Dufur and the lumber shipped by the railroad, or in The Dalles, with the logs shipped down by rail. Instead, when the Mt. Hood timber cutting began, mills were built in Tygh Valley and in Maupin, southeast of the timber sources.¹ Neither is an ideal location. Tygh Valley never has had a railroad, and the finished lumber must be trucked 8 miles to a siding on the Burlington Northern - UP line at Sherars. It is not possible to obtain figures of the cost of this trucking, but the cost of loading and

¹The mill at Maupin burned in 1953 and was purchased and rebuilt by the Mountain Fir Lumber Company of Independence, Oregon. Mountain Fir purchased the Tygh Valley mill in 1960.

unloading the trucks and operating them is not negligible. It is reported that the task requires one truck and driver full time. The situation at Maupin is little better. Maupin is located on the steep west bank of the Deschutes, the railroad tracks at the bottom, the only level ground one thousand feet, more or less, above. The site of the town itself is suitable only for a training school for Rocky Mountain goats. The mill is of course on the plateau above, and the lumber must be trucked down the steep road to the rail siding. The chips are ingeniously sent down through a pipe directly into the freight cars 1,000 feet below.

If the Great Southern had not been abandoned, therefore, the mills might have been located in a more optimal location and The Dalles would have benefitted. But no thought was given in the 1930s to having the city or county take over and operate the line to preserve it.

In general, the Great Southern was a victim of circumstances. Had national recovery of the economy, with higher lumber prices, come sooner, the opening of lumber production would have saved the line in all probability. Had John Heimrich not been so involved in family feuds and if he had dealt somewhat differently with his shippers,¹ he might have been able to carry the road through until recovery came. From the standpoint of agriculture, the loss of the railroad was not significant; from the standpoint of lumbering it clearly was. Had not businessmen of The Dalles been so financially hamstrung by the depression and bank failures, an organized attempt might have been made to save the road.

¹ Heimrich was basically a very wealthy man, but his assets were highly illiquid. Despite his wealth he spent much of his time maintaining the locomotives. But it is reported that he had an unfortunate tendency to try to squeeze too much out of some of the shippers for too little in the way of service.

CONCLUSIONS

Study of the abandonment of the Union Pacific's Shaniko line and of the Great Southern suggests the following conclusions:

1. When water transport to the destination is within economical trucking distance of the shipping points and the product can be transferred from truck to barge or rail mechanically, the abandonment of a railroad has little effect on the industry--in this instance wheat production--formerly dependent upon the line. The evidence in this study suggests that 50 miles, roughly, is the breaking point for truck-barge operation before costs come to exceed those of direct rail transport.
2. When rates on a line rise with distance, little harm is done to the shippers at more distant points on the line by abandonment; with blanket rates the distant point shippers enjoy an advantage under all-rail transport that they cannot receive under other forms and suffer losses if the line is abandoned.
3. If a product is being shipped long distances, water transport is not available, transfer from truck to rail is expensive, and rail rates reflect long distance bulk traffic costs, loss of a branch line can have significant influence on location of plants and can result in higher costs. This is demonstrated by Wasco County lumber production experience.
4. When the population of an agricultural area is relatively small, and inbound shipments of feed and fertilizer are either minor or can move by truck at little or no greater cost, the loss of the railroad line is not of serious consequence from the standpoint of inputs of production. This was certainly true of Sherman County.

5. The ability of the Union Pacific to operate its Sherman County line with a more than adequate return on salvage value over a long period of years with ton miles per mile of line between 60,000 and 70,000, despite use of a six-man crew and no deferral of maintenance, raises serious doubts about the validity of the D. O. T. figures used in the proposed restructuring of the northeast railroads. This line would never have met the requirements for inclusion in the proposed northeast system. One favorable feature, not recognized in the D. O. T. proposal, is the fact that bulk shipments of grain do not require daily service.

6. The extreme fluctuation of earnings from year to year, caused primarily by the exact timing of the sale of the crop (whether most of it moves before or after January 1) demonstrates the serious objection to evaluation of the viability of rail lines on the basis of data for any one year.

7. The experience with the flood damage demonstrated vividly the difference between the earnings necessary to warrant continued operation of a line with existing plant and those necessary if major investment is required to reconstruct portions of the line.

8. When rates on a branch line increase with distance, as on this line, the D. O. T. type of formula for determining viability of a line is completely unsatisfactory, based as it implicitly is upon the assumption that the rate is the same to any point on the line.

9. With traffic at the levels of the Sherman County line, rail costs per ton mile on the line itself are slightly lower than truck costs if return on investment is not included, and about the same if return on salvage value is included.

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